

Quality Programme

Project Quality Program - Application of Improved
D&D Planning Methodology at the Oak Ridge
Reservation, Tennessee

July 1999

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Prepared by AEA Technology Nuclear Engineering,
Decommissioning & Waste Management Group
Telephone +4419467 72432
Facsimile +4419467 72409

Author	Name	A Bishop
Approved by	Name	M T Cross
	Signature	
	Date	

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Summary

This QA program describes the management arrangements and procedures to be followed by staff working on the Application of Improved D&D Planning Methodology at the Oak Ridge Reservation, Tennessee.

Issue 2 now supersedes Issue 1 with changes to the classification of the report and the confidentiality statement page. No other changes are made.

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Foreword

This QA Program is issued in accordance with the AEA Technology Nuclear Engineering Quality Manual [AEAT/NUE/QM/001] and defines or references the quality assurance system and associated procedures to be used in the management of the Application of Improved D&D Planning Methodology at the Oak Ridge Reservation, Tennessee

Compliance with these procedures is mandatory upon all personnel working on the project.

No deviation from or alteration to this program is permitted without the written approval of the Project Manager.

Quality Assurance Policy

The Quality Assurance Standard to be applied to this project will be in accordance with EN ISO 9001:1994.

The policy of the management of the project is to maintain appropriate standards of quality assurance to ensure that the work satisfies the customer's requirements.

The Project Manager is responsible for monitoring the continuation of the policy in a manner acceptable to current quality assurance requirements and initiating corrective action should deficiencies be identified. The AEA Technology plc Technical & Engineering Support Department (North) QA Officer is responsible for providing advice on quality matters to the Project Manager and may refer where necessary to the AEA Technology plc Decommissioning & Waste Management Group QA Officer.

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1. Introduction

1.1 PURPOSE

This QA program is issued in accordance with the AEA Technology Nuclear Engineering Quality Manual (AEAT/NUE/QM/001) and supports the specification for the Application of Improved D&D Planning Methodology at the Oak Ridge Reservation, Tennessee (reference D&D/Planning/02). The program describes the way in which the project is managed and the specific procedures to be followed when working on the project.

1.2 QA STANDARD

The QA standard to be applied to the project is EN ISO 9001:1994 'Quality Systems Model for Quality Assurance in Design, Development, Production, Installation and Servicing'.

1.3 PROJECT DESCRIPTION

The Project involves the assessment of a facility at the Oak Ridge Reservation in terms of the D&D requirements for its safe management. Initial discussions suggest that the building 3505 at Oak Ridge termed the Metal Recovery Facility will be suitable for the assessment.

1.4 PLANT DESCRIPTION

Building 3505 was a Metal Recovery Facility used from 1952 to 1960 to process large quantities of radioactive materials using the PUREX process for the recovery of uranium-238, plutonium-239, neptunium-237, and americium-241. It is located in the central ORNL area adjacent to the Gunite Tanks. It is a small (6,000 sq. ft.) building comprising seven shielded cells, a canal, a dissolver room, a dissolver pit, office, locker room, storage area and other facilities. The building has been left under minimum care and surveillance resulting in some degradation of the structure and cladding.

2. Management Organization and Responsibilities

2.1 PROJECT MANAGEMENT STRUCTURE

The project is one of a number of projects managed by AEA Technology Engineering Services Inc. under the International Agreement Number DE-GI01-96EW56054 with the USDOE (EM50).

The project is managed on behalf of AEA Technology Engineering Services Inc., by a Project Manager appointed from within the Technical & Engineering Support Department (North) of AEA Technology Nuclear Engineering's Decommissioning & Waste Management Group. The project organization chart is given as Figure 1. The responsibilities of the principal members of the project team are defined below:

- **Project Manager**
Responsible for the overall project management of the project and prime point of contact with the Customer. Tony Bishop (AEA Technology Nuclear Engineering) is the designated Project Manager. He is supported by a team of staff in a number of areas of expertise including decommissioning, radiological protection, costing and waste management.
- **QA Officer**
The contract size negates the need for a full time QA Officer. However the Technical & Engineering Support Department (North) QA Officer will provide assistance in QA matters as and when required. The Project Manager will be responsible for approving of project related quality assurance documentation.
- **Commercial Manager**
Dr Steven Sanderson will be responsible for the management of all contractual issues between AEA Technology and the Customer.

2.2 COMMUNICATION WITH THE CUSTOMER

Project staff shall communicate with the internal customer (AEA Technology Engineering Services Inc.) as necessary. Communications to the USDOE and Oak Ridge operations staff should be carried out with the knowledge of the Project Manager as appropriate. The objective is to limit unnecessary queries and distractions.

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Commercial matters relating to the project shall be passed through Dr Steven Sanderson of the Commercial Department of AEA Technology Nuclear Engineering who will liaise directly with the customers commercial department.

2.3 PROJECT INTERFACES

The principal organizations interfacing with the project are:

- The internal customer AEA Technology Engineering Services Inc.
- The ultimate customer USDOE (EM50)
- The Oak Ridge operations organization via Bechtel Jacobs and USDOE

The interface arrangements with these organizations are described later in the QA program under the appropriate headings.

3. SAFETY

3.1 SAFETY RESPONSIBILITIES

The responsibility for the safety of the project is delegated through the AEA Technology Nuclear Engineering line management chain to the Project Manager. The AEA Technology Project Manager is able to consult the Decommissioning & Waste Management Group Safety Manager for specific advice on health and safety issues should this be necessary.

All personnel working on the project are responsible for their own health and safety in the work they do, and for the health and safety of persons performing work under their control.

4. Project Execution

4.1 WORK BREAKDOWN AND ALLOCATION

The Project Manager is required to divide the project into its constituent parts and develop a work breakdown structure chart (Ref. *AEAT/NUE/P701 Project Management*); then from the work breakdown structure produce work package descriptions, specifying the requirements for each package.

4.2 RESPONSIBILITIES OF ORGANISATIONS INVOLVED

4.2.1 AEA Technology Nuclear Engineering

AEA Technology Nuclear Engineering are responsible for undertaking the work program and achieving the completion of the project to time and cost and customer satisfaction.

4.2.2 AEA Technology Engineering Services Inc.

AEA Technology Engineering Services Inc., as holders of the contract have sub-contracted the work program to AEA Technology Nuclear Engineering and are responsible for communicating with the USDOE EM50 staff to issue work progress statements and monitor cost and time variations to the project as identified by the Project Manager.

4.2.3 Oak Ridge Operations

Oak Ridge Operations staff are responsible for providing the following services:

- responding to queries and requests for information from the Project Manager related to the facility chosen for the study
- attending one or more meetings with the Project Manager either as progress meetings or discussion groups considering the optioneering evaluation for the decommissioning of the facility chosen
- reviewing with the Project Manager the results of the assessments on the facility chosen to ensure consistency and applicability to the operating requirements at Oak Ridge.

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5. Project Records

5.1 PROJECT FILES

A master project file for the project will be maintained by the Project Manager in accordance with ***AEAT/NUE/P504 - Control Of Records***. All sub-project files will be registered in the master project file register held by the Project Manager. The master project file register is also used to indicate the holder and location of each file.

The master project file numbering system is TSAF/WL/267/sub-file number.

6. Project Controls

6.1 PLANNING

Work package programs are drawn up and agreed with the Project Manager. An overall work program in the form of a bar chart shall be produced from the individual work package programs. The overall project plan will be in accordance with ***AEAT/NUE/P701 Project Management***.

The work package programs and the overall project plan shall be updated periodically to reflect the current status of the project and shall be formally approved by the Project Manager.

6.2 PROGRESS REPORTING

Technical progress reporting to AEA Technology Engineering Services Inc., will be carried out and any modifications to the contract agreed.

6.3 PROGRESS MEETINGS

The Project Manager and relevant Team Leaders shall attend progress meetings held in the UK and US at periodic intervals as dictated by the work progress requirement. At these meetings, progress, the work package programs, and any outstanding technical issues shall be reviewed and discussed

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6.4 CONTRACT CHANGES

Project staff shall ensure that all changes to the contract are formally reported to the Project Manager and, following the Project Manager's approval, referred to the customer, in accordance with *AEAT/NUE/P703 Project Change And Contract Variation*.

6.5 NON-CONFORMANCE REPORTING

During the course of the project any non-conformances shall be formally reported to the Project Manager and resolved in accordance with local procedures and, as applicable, with *AEAT/NUE/P203 Non-Conformance, Corrective And Preventative Action*.

6.6 CUSTOMER COMPLAINTS

If the Project Manager or members of the project team receive complaints from the customer, or the beneficiaries, they shall be dealt with immediately and reported through the line management by the use of established local procedures. In all cases, complaints must be reported to the Project Manager who will centrally record and deal with the customer complaint in accordance with *AEAT/NUE/P303 Customer Satisfaction Management*.

7. Procurement

7.1 SUBCONTRACTING AND PURCHASING

The procedures to be followed by AEA project staff when producing purchasing specifications and subcontracting work are given in the procedure *AEAT/NUE/P601 - Purchasing*

The Project Manager shall ensure that all sub-contract terms and conditions are compatible with those of the main contract.

8. Radiological Protection

8.1 RADIOLOGICAL PROTECTION POLICY

The aim of radiological protection on the project is to obviate unnecessary exposure to radiation and to keep exposure as low as reasonably practicable while observing individual dose limits. In satisfying this policy, project staff will comply with local site safety instructions, supplemented by those measures required by their own national regulatory authorities. The Project Manager will consult with an AEA Technology Nuclear Engineering Radiation Protection Advisor (RPA) prior to the visits facilities. The Project Manager will disseminate the advice provided by the RPA to all members visit team in advance of any visit.

8.2 PERSONAL RESPONSIBILITY

Within the limits of their ability and training, all personnel are responsible for their own radiation protection and for adopting safe working practices.

8.3 HEALTH PHYSICS PRECAUTIONS

Individual project team members are responsible for taking all necessary precautions and understanding any limitations before entering an area where a radiological hazard may be present.

9. Interface Arrangements

9.1 GENERAL

The Project Manager is responsible for all aspects of the management of the project, including communication with the organizations which interface with the project. The way in which communication with the principal interface organizations are managed is described in the following paragraphs.

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9.2 THE CUSTOMER

The customer is AEA Technology Engineering Services Inc. Communications with the customer are normally directly between the Project Manager and the nominated AEA Technology Engineering Services Inc officer. They may be written or oral.

In the case of working communication on contractual issues, the Project Manager authorizes the AEA Technology Nuclear Engineering Commercial Manager to communicate directly with the customer.

9.3 OAK RIDGE OPERATIONS

Communications with the Oak Ridge Operations are normally directly between the Project Manager and the nominated officer, Mr. Jim Blair. Further contacts may be required with other staff at Oak Ridge with the agreement of Mr. Blair. In particular communications with Mr. Gerry Mandry, the Facility Manager of building 3505 are encouraged providing the Project Manager and Mr. Jim Blair are informed.

9.4 AEA TECHNOLOGY

On matters concerning the internal management of AEA Technology Nuclear Engineering, the Project Manager communicates through established line management routes. For commercial matters relating to the contract, the Project Manager communicates directly with the AEA Technology Nuclear Engineering Commercial Manager appointed to the project team. On matters concerning support provided to the project by other AEA Technology Businesses, the Project Manager communicates with the appropriate Team Leader.

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10. Training

10.1 PROJECT STAFF TRAINING

The Project Manager shall ensure that adequate training is given to team members, and to staff joining the project at a later stage, so that they are aware of and understand:

- the work specification;
- specific customer requirements;
- safety arrangements;
- QA requirements;
- financial controls;
- project planning;
- specific project procedures.

Where training is required this will take the form of “on the job” training.

11. QA Audits

11.1 INTERNAL QA AUDITS

Internal QA audits are arranged in accordance with the established audit procedures for AEA Technology plc (*AEAT/NUE/P202 Quality, Safety and Environmental Audits in Nuclear Engineering*).

11.2 CUSTOMER QA AUDITS

The customer has the authority within the terms of the contract to carry out QA audits of the project. The Project Manager shall ensure that all documentation is available to external auditors and that relevant staff are aware of, and co-operate with, the auditors. The AEA Technology Quality Manager or his delegated representative shall be in attendance during customer audits.

11.3 **AUDIT OF SUB-CONTRACTORS**

Sub-Contractors supplying items or services in support of the project may be audited. Where this is required, the procurement documentation clearly specifies the QA standards to be applied and that audits may be requested. These audits are carried out by suitably qualified staff normally from the Procurement Department staff ,on behalf of the Project Manager in accordance with *AEAT/NUE/P202 Quality, Safety and Environmental Audits in Nuclear Engineering*.

12. Distribution

- A Bishop – project file
 - T Done
 - Department QA file
 - Department QA officer
- Customer:
- Mr. J Blair, Oak Ridge Reservation, US
 - Dr L Judd, AEA Technology Engineering Services, Inc.

Figure 1 - Project Organization Chart